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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 765,148	01 17 2001	Christopher P. Ausschnitt	FIS920000191US1	7809

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DELIO & PETERSON, LLC
121 WHITNEY AVENUE
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EXAMINER

ESPLIN, DAVID B

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 06 04 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/765,148

Applicant(s)

AUSSCHNITT, CHRISTOPHER P.

Examiner

D. Ben Esplin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 6) ☐ Other:

DETAILED ACTION

Claim Objections

The numbering of the claims is improper because there are two separate claims labeled as claim 8. In order to correct for this error the claims previously labeled as claims 8 (the second claim 8)-21 are hereby renumbered as claims 9-22.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,965,309.

Ausschnitt teaches a process for controlling focus and dose exposure parameters in a lithographic process (see abstract) including providing a lithographic mask having a target mask portion (see col. 12 lines 44-49) containing a measurable dimension sensitive to defocus (col. 3 lines 47-49), projecting an energy beam through the target mask portion at a first focus setting in order to form a first target on a substrate (col. 3 lines 30-34), projecting an energy beam through the target mask portion onto a second location of the substrate at a second focus setting in order to lithographically form a second target (col. 4 lines 7-20), measuring the defocus sensitive dimension for each of the first and second targets and determining a desired focus setting of the

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energy beam based on the comparison of the dimensions of the first and second target (col. 3 lines 45-49). FIGS. 26a and 26b further show that the target may include first and second complementary, tone reversed target portions (complementary measurement targets 240 and 242). The first target shown includes a plurality of space element shapes of the same length and width and forming an array, and the second target shown includes an array of identical length and width, but where the first target is opaque, the second target is transparent, and vice versa. Ausschnitt also teaches that the width of the arrays (Li, Lis, Ls, Pi, and Ps) are the defocus sensitive dimension. The process disclosed in Ausschnitt is used to form focus setting targets on a semiconductor wafer for use in manufacture of microelectronic circuits (see abstract).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,807,647 to Hashimoto discloses a process including a target portion for imaging on a substrate in order to determine an optimum focal position for the substrate.

U.S. Patent No. 6,057,908 to Ota discloses a process including imaging a target onto a substrate at different focal positions in order to optimize focus in a lithographic manufacturing process.

U.S. Patent No. 6,542,221 to Tang et al. discloses a process including imaging multiple targets onto a substrate in order to find the best focus position for the substrate in a lithographic process.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Ben Esplin whose telephone number is (703) 305-4022. The examiner can normally be reached on Mon.-Fri. (8am-4:30 pm).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell E. Adams can be reached on (703) 308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

DBE

May 29, 2003

Rodney Fuller
Primary Examiner

A handwritten signature in black ink, appearing to read 'R. Fuller', written over the printed name of the examiner.